INTERNATIONAL SEARCH REPORT

IB2004/051781

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C09K11/78 H01J H01J61/44 According to International Patent Classification (IPC) or to both national classification and IPC **B. FIELDS SEARCHED** Minimum documentation searched (classification system followed by classification symbols) IPC 7 CO9K HO1J Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal C. DOCUMENTS CONSIDERED TO BE RELEVANT Category ° Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X US 6 157 126 A (HASHIMOTO KENJIRO ET AL) 1 - 125 December 2000 (2000-12-05) cited in the application column 3, line 20 - line 28 column 3, line 41 - line 47 column 6, line 25 - line 36 column 9, line 7 - line 21 claims X US 6 144 152 A (VAN DER VOORT DICK) 1-4,9-11 7 November 2000 (2000-11-07) claims 1,5-7 Α EP 0 023 068 A (PHILIPS NV) 1 - 1228 January 1981 (1981-01-28) cited in the application page 4, line 10 - line 25; example 39 X Further documents are listed in the continuation of box C. Patent family members are listed in annex. Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the "A" document defining the general state of the art which is not considered to be of particular relevance invention "E" earlier document but published on or after the International "X" document of particular relevance; the claimed invention filing date cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-ments, such combination being obvious to a person skilled in the art. citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means document published prior to the international filing date but later than the priority date claimed in the art. "&" document member of the same patent family Date of the actual completion of the international search Date of malling of the international search report 17 November 2004 25/11/2004 Name and mailing address of the ISA **Authorized officer** European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Lehnert, A Fax: (+31-70) 340-3016

INTERNATIONAL SEARCH REPORT

IB2004/051781

| Category ° | citation) DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages | Deloyeet to eleter No. | |
|------------|---|------------------------|--|
| Paredory - | Oracion of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. | |
| | US 5 585 692 A (SUGIMOTO YUJI ET AL) 17 December 1996 (1996-12-17) column 4, line 27 - line 38; example 1 | 1–12 | |
| | | | |
| | · | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| } | | | |

INTERNATIONAL SEARCH REPORT

[B2004/051781

| Patent document | \top | Publication | | Patent family | Publication |
|------------------------|--------|-------------|-----------|---------------|-------------|
| cited in search report | | date | member(s) | | date |
| US 6157126 | A | 05-12-2000 | CN | 1197910 A | 04-11-1998 |
| | | | EP | 0865071 A2 | 16-09-1998 |
| | | | ID | 20044 A | 17-09-1998 |
| | | | JP | 10312775 A | 24-11-1998 |
| | | | TW | 473604 B | 21-01-2002 |
| US 6144152 | Α | 07-11-2000 | CN | 1146012 T | 14-04-2004 |
| | | | EP | 0976142 A1 | 02-02-2000 |
| | | | WO | 9933092 A1 | 01-07-1999 |
| | | | JP | 2001512625 T | 21-08-2001 |
| EP 0023068 | A | 28-01-1981 | NL | 7905680 A | 27-01-1981 |
| •• | | | CA | 1147944 A1 | 14-06-1983 |
| | | | DE | 3060368 D1 | 24-06-1982 |
| | | | EP | 0023068 A1 | 28-01-1981 |
| | | | ES | 8104378 A1 | 01-07-1981 |
| | | | HU | 183186 B | 28-04-1984 |
| | | | JP | 1302401 C | 14-02-1986 |
| | | | JP | 56028282 A | 19-03-1981 |
| | | | JP | 60023798 B | 10-06-1985 |
| | | | US | 4319161 A | 09-03-1982 |
| US 5585692 | A | 17-12-1996 | CN | 1102751 A ,B | 17-05-1995 |
| | | | DΕ | 69403401 D1 | 03-07-1997 |
| | | | DE | 69403401 T2 | 30-10-1997 |
| | | | EP | 0638626 A1 | 15-02-1995 |
| | | | JP | 6306359 A | 01-11-1994 |
| | | | WO | 9419422 A1 | 01-09-1994 |
| | | | KR | 145528 B1 | 01-08-1998 |